

A NEW SPECIES OF TITHONIA (COMPOSITAE) AND INFRAGENERIC CLASSIFICATION

JOHN C. LADUKE

A revision of *Tithonia* (LaDuke, 1980) necessitates some nomenclatural additions and the description of a new species.

Tithonia hondurensis LaDuke, *sp. nov.*

TYPUS: HONDURAS, El Paraiso, 5 mi W of dirt rd. to Ojo de Agua and highway from Danli to Zamorano (Hwy. 4), 4 Dec 1978, V.A. Funk, K. Landon 2938 (HOLOTYPUS, OS!; ISOTYPUS, F! NY!).

Frutex, erectus, perennis, 0.5–4 m altus. Caules rotundati, fusci, moderate hispidi vel glabri. Folia alterna, sessilia aut petiolata, petiolis 4 mm longis; laminae lineares-lanceolatae, interdum basi duobus lobis parvis, (3–) 6.5–23 cm longae, (0.5–) 1.5–2.8 cm latae, apice acuminatae, basi attenuatae vel rotundatae-attenuatae, supra pubescentes pubibus densis brevibus, subter longioribus tomentosae, margine integrae vel serratae crenatae, revolutae. Pedunculi 8.5–25 cm longi, 3–7 mm diametro, sparsim vel moderate hispidi prope capitula, infra deminuti. Capitula plerumque solitaria. Receptacula (5–) 10–15 mm diametro. Phyllaria 20–30, in quatuor seriebus, linearia vel spathulata, apice rotundata; bractae extimae 4.5–8 mm longae, 2–4 mm latae, abaxialiter modice puberulae; bractae intimae 7–11 mm longae, 2–4 mm latae, apice rotundatae, abaxialiter glabrae. Paleae striatae, 6.5–9 mm longae, 0.75–2 mm latae; apex acutatus, 0.5–1 mm longus, interdum lateraliter lobatus, minute pubescens. Flosculi radii 13–15; ligulae luteae, lineares vel ovatae, (13–) 18–42 mm longae, 6–10 mm latae, apex trifidae; tubi 1–1.5 mm longi, 0.5–0.75 mm diametro; pappus nullus; achenia in una serie, triangularia, alba. Flosculi disci 60–80; corollae luteae, lobis 5, 0.75–1 mm longis, 0.5 mm latis, apice acutis; faux cylindrica cum basi expansa minute puberula, parte cylindrica 2.5–3 mm longa, 0.75–1 mm diametro, parte expansa 1–2 mm longa, 1 mm diametro; tubus minute puberulus, 0.5–1 mm longus, 0.5–0.75 mm diametro; antherae nigae, 3–4 mm longae; stylus 5.75–7 mm longus; stigmata papillata 1.5–1.75 mm longa; pappus nullus; achenia nigra, rotundata quadrangularia, 3.5 mm longa, 1.5 mm diametro, basi eliasomate. Chromosomatum numerus, $n = 17$.

PRINCIPAL FLOWERING TIME: November–March

DISTRIBUTION: Belize and Honduras

REPRESENTATIVE SPECIMENS: BELIZE. **Cayo:** 15 Mar 1960, *Hunt 295* (LL, BM); Makal River at end of Kinloch rd, 22 Jan 1970, *Spellman 1412* (MO). HONDURAS. **Comayagua:** 3 km S of Siguatepeque, 9 Jan 1969, *Molina 23298* (F, MO, NY, US); ca 20 mi SE Comayagua on rte 1, 29 Oct. 1976, *Stuessy & Gardner 4420* (OS). EL PARAISO: Manzaragua rd, 5 Jan 1947, *Williams 11497* (F, GH, MEXU); 8 km N of Yuscaran, 30 Nov 1952, *Williams & Williams 18655* (F, GH, LL, US); NE of Danli, 15 Mar 1957, *Molina 7599* (F); in Pine Forest of Guayabillas Road to Ojo de Agua, 23 Nov 1970, *Molina 25904* (DUKE, F, MO, NY, U).

Tithonia hondurensis is a small shrub and is most closely related and similar to *Tithonia longiradiata* (Bertol.) S.F. Blake. It can be most easily distinguished from it by its smaller stature, smaller heads, and revolute leaf margins. Larger plants are distributed in Belize and diminutive plants are found in the area of Sigatepeque, Honduras. *T. hondurensis* has the same number of chromosomes as all the *Tithonia* taxa, with $2n = 34$. Illustrations, distribution map and additional comments may be found in La Duke (1980, and in press b).

GENERIC SUBDIVISION

The following infrageneric divisions are validated prior to a publication concerning the flavonoids of the genus (La Duke, 1982a).

Tithonia Section *Tithonia*

Series **Tithonia**

Herbaceous annuals; leaves deltate to 3–5 lobed; involucre 2–3 seriate. TYPE SPECIES: *Tithonia rotundifolia* (Mill.) S. F. Blake.

Series **Grandiflorae** La Duke, *ser. nov.*

Plantae perennes fruticosae aut arborescentes; folia petiolata, laminis deltatis vel lobatis; ligulae plus quam 45 mm longae.

TYPUS: *Tithonia koelzii* McVaugh.

Series **Fruticosae** La Duke, *ser. nov.*

Plantae perennes suffruticosae; folia lanceolata, sessilia aut petiolata; phyllaria in tribus aut quatuor seriebus; achenia quadrangu-

laria. TYPUS: *Tithonia fruticosa* S. M. Canby & J. N. Rose in J. N. Rose.

Tithonia Section **Mirasolia** (Sch.-Bip. in Seemann) La Duke, *stat. nov.* *Tithonia* Gmelin Subgen. *Mirasolia* Sch. Bip. in Seemann

Perennial shrubs; leaves linear to ovate, usually sessile to short-petiolate, margins serrate to crenate; phyllaries 3–4 (–5)-seriate; disk achenes rounded-quadrangular, epappose, glabrous, with eliasome at base. TYPE SPECIES: *Tithonia calva* Sch.-Bip. in Seemann.

LITERATURE CITED

- LA DUKE, JOHN. 1980. Revision of *Tithonia*. Ph.D. Thesis. The Ohio State University.
- . 1982. a. Flavonoid chemistry and systematics of *Tithonia* (Compositae). Amer. J. Bot. In Press.
- . 1982. b. Revision of *Tithonia*. Rhodora. In Press.

DEPARTMENT OF BIOLOGY
UNIVERSITY OF NORTH DAKOTA
GRAND FORKS, ND 58201